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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/705,369 | 11/03/2000 | Stephen V. R. Hellriegel | 901115.431 | 7552 |

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EXAMINER

NORRIS, JEREMY C

ART UNIT PAPER NUMBER

2827

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/705,369

Applicant(s)

HELLRIEGEL ET AL.

Examiner

Jeremy Norris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-28 and 30 is/are allowed.
- 6) ☒ Claim(s) 15-18, 21, 23-25, 29, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) 19, 20 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11-3-00 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation "the said plurality of electrically conductive traces". There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the plurality of segments". There is insufficient antecedent basis for this limitation in the claim.

Claim 32 recites the limitation "the segments". There is insufficient antecedent basis for this limitation in the claim.

Examiner assumes that claims 31 and 32 were meant to depend from claim 30 where a plurality of segments is introduced.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15-18, 21, 23-25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,342,735, granted to Colelli et al. (hereafter Colelli) in view of US 5,822,191, granted to Tagusa et al. (hereafter Tagusa).

Colelli discloses, referring to figure 4a, an electronic connector, comprising: a substrate (20); a plurality of features (42') positioned on said substrate with reference to a first set of registration guides (22'); an additional feature (not shown but referred to, see col. 2, lines 35-45) positioned on said substrate with reference to said first set of registration guides; a second set of registration guides (26) positioned on said substrate concurrently with said additional feature; and a second additional feature (the diagonal traces over 26) positioned on said substrate with reference to said second set of registration guides. Colelli does not specifically state that the substrate is flexible [claim 15]. However, it is well known in the art to use alignment marks on flexible wiring boards to provide for precise placement of components and traces as evidenced by Tagusa (see col. 8, lines 30-40). Therefore, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to place the alignment marks of the invention of Colelli on a flexible wiring board as is well known in the art, evidenced by Tagusa. The motivation for doing so would have been to allow for precise placement of components and conductive traces.

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Additionally, the modified invention of Colelli discloses that said plurality of features includes copper (see claim 22) [claims 16, 17, 18, 21], wherein said concurrent positioning of said additional feature and said second set of registration guides results in a fixed and known positional relationship between the additional feature and the second set of registration guides [claim 23], wherein said positioning of said plurality of features with reference to said first set of registration guides results in a positional relationship fixed within known tolerances between any two of said plurality of features [claim 24], wherein said positional relationship between said additional feature and said second additional feature is fixed and known with a high degree of confidence as compared to said positional relationship between any two of said plurality of features [claim 25].

Moreover, the modified invention of Colelli discloses an electronic connector, comprising: a flexible substrate; a first set of registration guides on the flexible substrate; a plurality of first features positioned on said substrate with reference to the first set of registration guides; a second feature positioned on said substrate with reference to said first set of registration guides; a second set of registration guides positioned on said substrate concurrently with said second feature; and a plurality of third features (not shown, referred to, see col. 2, lines 40-45) positioned on said substrate with reference to said second set of registration guides [claim 29].

Response to Arguments

Applicant's arguments with respect to claims 15-18, 21, 23-25, and 29 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claim 26-28 and 30 are allowed.

Claims 19, 20, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 31 and 32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

| | |
|--------------|----------------|
| US 5,682,297 | Silva, |
| US 6,037,671 | Keplet et al., |
| US 6,201,193 | Hashimoto. |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Norris whose telephone number is 703-306-5737. The examiner can normally be reached on Mon.-Th., 9AM - 6:30 PM and alt. Fri. 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7724 for regular communications and 703-305-7724 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN
August 11, 2002



KAMAND CUNEO
PRIMARY EXAMINER